



Multiple stabbing in sex-related homicides



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ABSTRACT

It is possible that sexually driven homicides are the consequence of sexual deviation, but more often than not the main cause of such homicides stems from a non-paraphilic person's emotional component. It is known that homicides which involve multiple stabbing are very often the result of the assailant's highly expressed affect. This study tries to establish whether such homicides are essentially related to the sexual motives of the murderer. This paper is conducted through a retrospective autopsy study that includes 766 cases of homicides. These were reviewed and analysed according to the motive of the homicide, as well as by method, age, and gender of the victim, and the relationship between the victim and the assailant. The motives of homicides are classified as non-sexual and sexual, including homicides related to rape, jealousy, amorous affairs outside of an established relationship, deviant sexual behaviour of psychiatric patients, paraphilia, and disturbed emotional relationships between the victim and the assailant. Cases include both hetero- and homosexual relationships. Multiple stabbing occurs significantly more frequently in sex-related homicides (≥ 3 stab wounds) than in other homicide types. When the criteria for multiple stabbing are changed (≥ 4 , 5, or 25 stab wounds), the percentage of sex-related homicides rises in every group in relation to the increased number of wounds. Sensitivity and specificity are represented by ROC curves for 3, 5 and 7 stab wounds. The correlation coefficients between multiple stabbing and sex-related homicides regarding gender are all near 0.9. For female victims, all homicides committed by 25 and more stab wounds were found to be sex-related. Statistically, jealousy was the most frequent motive for sex-related multiple stabbing homicides. Regardless of age, homicides involving multiple stabbings should be considered sex-related, especially when the victim is female.

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1. Introduction

The roots of human sexuality are to be found in the human reproductive system and the ability to procreate. The three components of the human sex drive are biological (instinctive), physiological

(functional), and emotional (mental). The final (emotional) component is the cumulative manifestation of one's psychosexual development. According to experts, one's psychosexual or emotional component is the strongest of these three, accounting for approximately 70% of one's sex drive. As emotions are controlled by the mind, it would follow that "the mind controls the act".¹

According to Carson et al., sexual deviations are described as, "acts which involve non-consent or assault and those acts which can be described as problematic from the standpoint of the welfare of society".² However, according to the American Psychiatric Association, there are nine types of paraphilia, which are listed as

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follows: fetishism, frotteurism, voyeurism, exhibitionism, paedophilia, transvestism, masochism, sadism, and paraphilia not otherwise specified (necrophilia, zoophilia, and others). Some authors distinguish incest and rape as separate from paraphilia. The term 'paraphilia' itself (*para* meaning *deviance*; *philia* meaning *attraction*) denotes an attraction to deviance. "The paraphilias are a group of persistent sexual arousal patterns in which unusual objects, rituals, or situations are required for full sexual satisfaction to occur".² Sometimes, sexual deviations may lead to homicide^{3,4}; however, it is more common for the emotional component in a non-paraphilic person to be the main cause of a sexually driven homicide. Moreover, sexual deviant behaviour is not unusual in a person suffering from schizophrenia.^{5,6}

In general, violent behaviour can be defined as an intentional act of physical aggression against another human being that is likely to cause physical injury.⁷ The nature of violence can also differ. The most common classification sorts violent behaviour into two groups: affective aggression, which includes all forms of aggression with the exception of predation since it is associated with threats or fear; and predatory aggression, which is usually distinct from the former.^{8,9}

Concerning motive one possible homicide classification quite similar to that described above is their division into the affective (emotional) and the instrumental. The term 'affect' can indicate an instinctual reaction to stimulation occurring prior to the typical cognitive processes considered necessary for the formation of more complex emotions. Affective homicides may be committed in a state of a highly negative emotional charge (affect), as well as out of it. Crime scene evidence often confirms any emotional intensity at the time of the homicide, which occasionally manifests in 'overkill' of the victim.¹⁰ Even though instrumental homicides are done out of self-interest, these two motives often overlap.¹¹

The methods and the number of wound in murder cases are reflected by social condition and situation, such as the regulation of guns, economical and educational situation, personality and characteristics of the population and difference of the religion. It is generally believed that multiple wounds were recognized in the cases where a weaker individual inflict the stronger one sure to make the death of victim. However, throughout the long-lasting forensic practice of the authors of this paper, a frequent connection has been noticed between multiple stabbing homicides and motives that could otherwise be related to the sexual life of the victim or of the offender. Even though it is already known that multiple stabbing homicides are the result of a highly expressed affect of the assailant, as they often imply intense anger or rage towards the victim, this study aims to establish as to whether such homicides are fundamentally related to the sexual motives of the killer. Considering that emotions are the strongest component of the human sex drive (70%), affective (emotional) homicides are the most commonly observed.

2. Materials and methods

This retrospective autopsy study includes 766 homicide cases, all of which were reviewed according to the method of the homicide, the age and gender of the victim, the relationship between the victim and the assailant, and the motive. Based on the method by which the victim was killed, all the cases were divided into five groups:

- three or more stab wounds (multiple stabbing);
- one or two stab wounds, plus cases involving slaughter or use of an axe;
- violent asphyxiation (smothering, manual or ligature strangulation, "burking", etc.);
- gunshot; and
- blunt trauma.

As to better find any possible correlation between method, assailant, and victim, cases in which two or more different methods were used in committing the homicide were excluded from the study.

The motives of these homicides were classified as sexual and non-sexual; the former being those cases related to rape, jealousy, amorous affairs outside of an established relationship, the deviant sexual behaviour of psychiatric patients, paraphilia, and disturbed emotional relationships between the victim and assailant (including both hetero- and homosexual relationships). Cases in which the motive remained undetermined were excluded from the study. In addition to descriptive statistics (average mean, median, standard deviation, and range), the statistical tests used in this study were the nonparametric Z-test for comparing differences between proportions, the Student's *T*-test, and ROC curves for sensitivity and specificity. The results were obtained through utilisation of IBM SPSS software.

Along with multiple stabbings, the correlation coefficients of and determination coefficients between the number of stab wounds and percentage of sex-related homicides in multiple stabbing groups were also determined according to the victim's gender.

In some cases, the murderers had a history of psychiatric disorders, mostly schizophrenia, accompanied by sexually deviant behaviour. In personal communication with experienced medical examiners, data was obtained for several representative sex-related cases involving multiple stabbing, which are presented in more detail in the discussion.

3. Results

In the analysed sample of the 766 homicides, those committed by use of a firearm were the most frequent (398 cases). Stabbing led to death in 206 murders, from which 96 were of a single stabbing and 110 involved multiple stabbing. This latter group represented 14.36% of all the 766 homicides. 104 cases were related to blunt trauma and 58 to asphyxia (Table 1). Out of all the 766 homicide victims, 74.4% were male and 25.6% female. However, for the victims of the 110 multiple stabbing murders, the gender ratio was 60:40 (66 male to 44 female). The mean age of all the 766 homicide victims was 44.72 years (SD 18.42, median 42, min. 4, max. 94), with no statistically significant age difference present between the two genders. The oldest victims were females who were killed as a result of non-sex-related blunt trauma (mean age 71.50, SD 10.34, median 48.5, min. 62, max. 81), while the youngest were males who were killed as a result of sex-related asphyxia (mean age 28.00, SD 21.94, median 28, min. 9, max. 47) (Table 1). The age difference between these two groups is statistically significant (*T*-test, $p < 0.005$).

Multiple stabbing homicides (≥ 3 stab wounds per victim) were significantly more often sex-related than any other category (Z-test, male $p < 0.005$, female $p < 0.05$, total $p < 0.005$, Table 1 located in the cell with values marked in bold and *, †, and §). Regarding this designation of multiple stabbing homicides, 54.55% of these 110 cases were sex-related (60 cases: 30 male and 30 female victims). In contrast, over 90% of homicides were not sex-related in victims killed by firearm or from blunt trauma (Table 1 marked in italics).

In stabbing homicides, a significant difference in gender rates was determined to be found in female victims (the male rate was $66/142 = 46.48$ and the female rate was $44/64 = 68.75$; Z-test, $p < 0.005$). Among the 110 victims of multiple stabbing homicides, the percentage of sex-related homicides was 68.18% (30 out of 44 cases) for the female group, while it was 45.45% (30 out of 66 cases) for the male group (Table 1. grey cells marked by †). This difference was found to be statistically significant (Z-test, $p < 0.025$).

Table 1
Main table.

		Asphyxia		Firearm		Blunt		Single stabbing		Multiple stabbing		Z-test p value
		Sex-related	Non-sex related	Sex-related	Non-sex related	Sex-related	Non-sex related	Sex-related	Non-sex related	Sex-related	Non-sex related	
Male												
Age	Average	28.00	61.82	47.40	39.60	45.33	47.94	41.83	35.56	48.40	40.89	
	Sd	21.94	15.74	13.71	14.31	22.10	16.78	10.91	17.11	23.19	19.13	
	Median	28	65	48.5	38	49	44.5	42.5	32	55	39	
	Min	9	30	18	16	19	23	22	8	4	12	
	Max	47	80	65	80	68	80	55	69	76	78	
	Proportion	4/26	22/26	20/322	302/322	6/74	68/74	12/76	64/76	30/66	36/66	<0.005*
Positive relationship		15.38%	84.62%	6.21%	93.48%	8.11%	90.54%	15.79% *	84.21%	45.45% *†	54.55%	
		4/4	18/22	16/20	240/302	6/6	42/68	8/12	56/64	28/30	32/36	
		100.00%	81.82%	80.00%	79.47%	100.00%	61.76%	66.67%	87.50%	93.33%	88.89%	
Female												
Age	Average	64.60	64.27	40.93	47.63	39.20	71.50	47.00	58.00	45.67	59.43	<0.025‡
	Sd	13.01	23.96	14.46	16.54	22.12	5.97	10.34	11.23	22.51	24.63	
	Median	65	70	41	48.5	44	70.5	48.5	56.5	37	68	
	Min	42	8	20	8	14	62	32	44	15	20	
	Max	78	94	71	76	73	81	59	79	85	91	
	Proportion	10/32	22/32	28/76	48/76	10/30	20/30	8/20	12/20	30/44	14/44	<0.05‡
Positive relationship		31.25%	68.75%	36.84%	63.16%	33.33%	66.67%	40.00% ‡	60.00%	68.18% ‡†	31.82%	
		6/10	10/22	28/28	42/48	10/10	10/20	8/8	12/12	18/30	12/14	
		60.00%	45.45%	100.00%	87.50%	100.00%	50.00%	100.00%	100.00%	60.00%	85.71%	
All												
Age	Average	54.14	63.05	43.63	40.70	41.50	53.30	43.90	39.11	47.03	46.08	
	Sd	22.86	20.07	14.37	14.87	21.58	17.98	10.73	18.22	22.70	22.21	
	Median	65	66.5	44	38	44.5	52.5	46.5	34.5	39.5	40	
	Min	9	8	18	8	14	23	22	8	4	12	
	Max	78	94	71	80	73	81	59	79	85	91	
	Proportion	14/58	44/58	48/398	350/398	16/104	88/104	20/96	76/96	60/110	50/110	<0.005§
Positive relationship		24.14% §	75.86%	12.06%	87.69%	15.38%	83.65%	20.83%	79.17%	54.55% §	45.45%	
		10/14	28/44	44/48	282/350	16/16	52/88	16/20	68/76	46/60	44/50	
		71.43%	63.64%	91.67%	80.57%	100.00%	59.09%	80.00%	89.47%	76.67%	88.00%	

When the criteria for multiple stabbing (≥ 4 , 5 or 25 stab wounds) are changed, the percentages of sex-related homicides rise in every group in accordance with a corresponding increase in the number of stab wounds. The correlation coefficient between the number of stab wounds and sexual relationships for the male group is 0.9361, for the female group 0.7935, and 0.9316 for the sample as a whole (Fig. 1). The percentages of sex-related cases in homicides committed with 21 or more stab wounds were over 83%, regardless of gender. In the female group, all 8 homicides committed with 25 and more stab wounds were sex-related (Fig. 1).

The ROC curves for 3, 5, and 7 stab wounds as levels for multiple stabbing sex-related homicides are given in Fig. 2. They show the area under curve, the sensitivity and the specificity for 3, 5, and 7 stab wounds, respectively: 0.970, 98.4% and 33.1%; 0.735, 82.0% and 43.5%; 0.697, 75.4% and 65.7%.

In the group of victims who died due to multiple stabbings which were sex-related, females were almost 15 years younger than those in the group where the victim died from multiple stabbing, but which were non-sex-related. Conversely, males were almost 8 years older in cases which were sex-related and involved multiple stabbing.

In 79.11% of all the 766 homicides, the victim and the assailant knew one another. There was no significant difference regarding the relationship of the victim and the murderer between sex-related and non-sex-related multiple stabbing homicides (Table 1). An interesting point of note is that all the victims of blunt trauma sex-related homicides had known the assailant.

Jealousy was found to be the main motive in sex-related multiple stabbing homicides (Z-test, $p < 0.000$) (Table 2). In the group of

homicides where the victim died due to multiple stabbing, the involvement of psychiatric patients as the perpetrator proved to be the highest when compared to the other homicide groups under review ($16/110 = 14.54\%$). However, this difference did not prove to be significant (Z-test, $p > 0.05$) when compared to the second highest rate (the asphyxia group, $4/58 = 6.89\%$). In all observed cases which included psychiatric patients, they suffered from schizophrenia.

4. Discussion

The results of this study demonstrate that the presence of sexual motivation for committing homicide strongly coincides with instances of multiple stabbing, even more so than in any other method of homicide. The association between multiple stabbing and sex-related homicides rises in accordance with an increase in the number of stab wounds per victim.

It is still very difficult to determine an actual fine line separating homicide committed in affect and emotional-sex-related homicide. However, the percentage of sex-related homicides in the multiple-stabbing group, amongst which there are those committed in sex-related affect, demonstrates that the motive behind a multiple-stabbing homicide should be considered to be sex-related, not affect-related, in its official investigation. This study has also demonstrated that multiple-stabbing non-sex-related homicides committed in a state of affect occur significantly less often than do sex-related homicides without any influence of a state of affect. This claim also bears more importance as the number of stab wounds rises. In this study, all eight women that sustained 25 or more stab wounds were murdered by an assailant who was

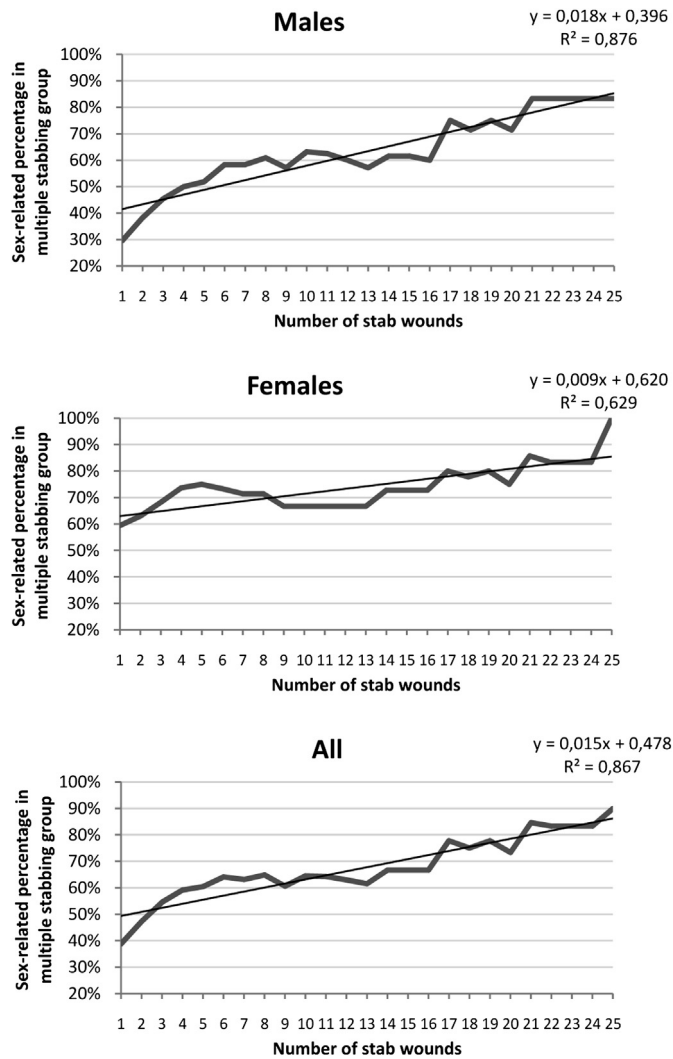


Fig. 1. Correlation (R) and determination (R^2) coefficients for "Male", "Female" and "All" subgroups of sex-related multiple stabbing group.

motivated by a sexually related sphere of life. The hypothesis of a strong relationship between sexual motivation in multiple stabbing in homicides is also confirmed by the ROC curves and the high sensitivity and specificity for the estimation of the motive according to the number of stab wounds.

A statistical analysis of the victims and assailants' relationships demonstrated quite significant results which could be useful in investigations where the murder suspect is unknown. All sex-related homicides, regardless of the method used to murder the victim, are highly associated with the relationship between the victim and the assailant. These percentages are found to be slightly lower for female groups, as women are more often victims of homicides involving rape when the assailant might be specifically unknown to her.

Although no statistical significance has been found in cases of multiple-stabbing homicides with unknown assailants, it is the opinion of this paper that if a person suffering from schizophrenia can be found near or in the vicinity of the victim, this person should at the very least be considered to be a possible suspect in the homicide. However, schizophrenics have not been here recognized as being significant assailants in multiple stabbing homicides and it would be beneficial for further studies to investigate and focus on this key point.

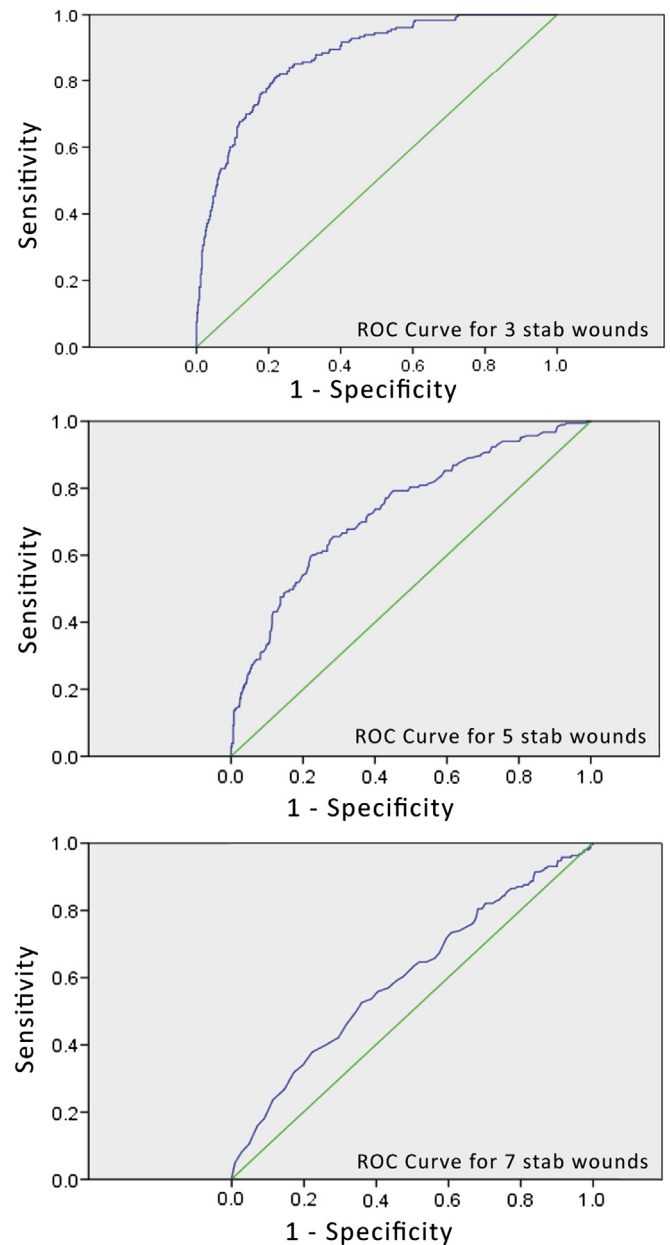


Fig. 2. ROC curves for 3, 5, and 7 stab wounds. Diagonal segments are produced by ties.

Jealousy has been proven to be a dominant characteristic among circumstances that lead to homicide. Likewise, if a murder stemming from the unfaithfulness of one of the emotional partners in a relationship is considered to be an expression of jealousy, this claim gains greater significance. Such a motive should classify these homicides as being affective, as even if the threat is internal (such as

Table 2
Occasion in sex-related multiple stabbing homicides.

Occasion	Number	%
Jealousy	27	45.00
Other marriage and relationship issues	10	16.66
Cheating	7	11.66
Rape	6	10.00
Sexual deviant psychiatric patients	5	8.33
Homosexual related	3	5.00
Pedophilia related	2	3.33
Total	60	100

delusional jealousy), the reduction or elimination of the threat is still the primary goal.

In 5 homicide cases, the violent mutilation of the victim's external genitalia (e.g., cutting off the penis or nipples, stab or incised wounds of the vulva, a close range firearm entrance wound on the penis, etc.) was recorded. In the cases of this study, three males and two females ranging in age from 4 to 68 were found to have mutilated genitalia. All of these homicides were sex-related, regardless of the method of homicide used. In all five of these cases, the victim had known the assailant.

Another finding is that sexually motivated homicides of men committed through use of firearms or blunt trauma are significantly less frequent than non-sex-related ones committed in the same manner.

As has already been noted, there are many classifications of violent behaviour. One such category is found to exist in animals as well as in humans: sex-related aggression as a sexual act accompanied by components of aggression.¹² The most common classification category divides violence into affective and predatory; the former of which is preceded by high levels of sympathetic arousal, characterized by fear and/or anger, and is a response to a perceived imminent threat.¹³ This affective classification is also sometimes called impulsive,¹⁴ reactive,¹⁵ hostile,¹⁶ or emotional.¹⁷ However, the latter category of predatory violence is not preceded by autonomic arousal; rather, it is characterized by the absence of emotion and threat, and is cognitively planned. This category can also be referred to as instrumental,¹⁶ premeditated,¹⁸ proactive,¹⁹ or cold blooded.²⁰ However, violent behaviour cannot always be sorted into one of these groups, as there are cases when violent acts contain elements of both. Additionally, there may be 'mixed' violent acts that are actually a sequence of one mode to another, occurring within the same event.¹³ Therefore, bimodal distribution should be further discussed in relation to categorisation.

Gottman et al.¹⁷ found that when a subgroup of males who committed domestic battery was subjected to a conflict situation in a laboratory with their spouses, their heart rate actually showed deceleration. However, the majority of subjects (84%) did show an increased heart rate as the conflict heightened. While the subgroup had more generalized antisocial histories and were more sadistic (predatory), the latter group were found to be more emotional and angry (affective).²⁰

5. Illustrative cases

5.1. A victim of paedophilia who would later turn on and murder his abuser

A 56-year-old locally famous artist was found dead in his home with 48 stab wounds mostly to his front chest and abdomen. On the wall in the room where his body was discovered, there was a pentagram drawn in blood accompanied by 'satanic'-related text that was located above the body. Investigators originally thought the crime to be of a satanic-ritual murder, but a 17-year-old man later confessed to committing the murder. He defended his actions, stating that he had done so due to the fact that the neighbour had been sexually molesting him since he was only 10 years old.

After the completion of investigation, especially searching the Facebook profile of the young man, it was concluded that this was not a murder committed in a state of affect, but as a consequence of long-lasting sexual abuse; the murderer's taste in music merely contributed to the final 'satanic' appearance of the homicide.

5.2. A grandmother killed by her lesbian granddaughter

A 73-year-old woman was found dead in her apartment with 18 stab wounds to her back. Circumstances pointed to a robbery, due

to the fact that the flat had been ransacked and a jewellery box found missing. The old woman was the legal guardian of her 15-year-old granddaughter, whose parents were divorced and whose mother was a psychiatric patient, and father an alcoholic. At first, police believed the suspect to be the granddaughter's father, due to the sour relationship shared between the two. However, his alibi was fully confirmed. Medical examiners suggested that it could have been a sex-related homicide, based on the multiple stabbing. This eventually lead the police to the granddaughter, who confessed that she and her girlfriend killed the old woman since she was trying end the two's sexual relationship. Only afterwards did they purposefully ransack the apartment in order to mislead the police.

In that Bell and Vila's study has shown that the mean number of stab wounds is greater among homosexuals, though the difference is not statistically significant, it could be concluded that this homicide was a consequence related to society's general intolerance to homosexual relationships.²¹

5.3. Typical cases of non-rape sex-related homicides

- (1) After litigation proceedings in a divorce trial, a woman stabbed her husband's lover at a bus station in front of the court building. The lover openly laughed at her in the courtroom during the trial, saying that he was her man now. The victim sustained more than 100 stab and cut wounds from a kitchen knife, which was hidden in the wife's small handbag.
- (2) A husband stabbed his wife with a kitchen knife as he had been suspecting that she was having an affair. She suffered roughly 20 stab wounds, all of differing depths. This difference can be interpreted by the reduction of the affect and the force he used to physically stab the knife.
- (3) A 25-year-old schizophrenic man, institutionalized for many years in a psychiatric hospital, was released for the weekend to visit his home after his state had improved. On his first night, he killed his father in bed, stabbing him over 30 times with a kitchen knife. During his treatment in the hospital, the patient commonly showed signs of sexually deviant behaviour, such as public masturbation, regularly walking around the hospital in the nude, sexually attacking other patients regardless of their gender, etc. Earlier genetic tests proved he suffered from 47XYY aneuploidy. This homicide is also characterized as being sex-related.
- (4) In one case, the charred and amputated parts of a single body, including the legs, the arms, the head, and the torso, were found. The subsequent autopsy found that the body was of a younger male and that the cause of death was due to exsanguination from at least 10 stab wounds. The autopsy also found that the amputations and the burning of the parts all occurred post-mortem. The victim was identified to be a drug dealer, which directed police to pursue their investigation in relation to this fact. However, when police arrived at the victim's apartment to collect evidence, another man who also lived there attempted to flee. When he was later arrested, he admitted to being in a homosexual relationship with the victim, who wanted to end their relationship and start a new one with another partner. This case is clear to be a sex-related homicide as a consequence of jealousy. When comparing the mean number of injuries (fatal sharp, blunt, and total) and the extent of injuries on the body,²¹ it is well established that homosexual homicides can be more violent than heterosexual ones. This arises due to the fact that the basic emotional charge seems to be more intensive in homosexual than in heterosexual couples, which results in more deviant homicide patterns.

5.4. Typical cases of rape-related homicide

A woman known to lead a promiscuous life-style was killed after having refused to engage in sexual intercourse with her distant relative, who attacked, raped, and stabbed her approximately 125 times in the back section of her right shoulder and the right side of her chest (a total surface of 30 × 35 cm). It was concluded that the long-term dissatisfaction upon the part of the assailant culminated in an affective homicide during which sexual excitement was achieved by repeatedly stabbing the victim, fully aware of the victim's suffering.

Sometimes it is very difficult to determine what the circumstances in some cases had been, e.g. properly distinguishing between a sexual deviant psychiatric patient and a rapist. In such cases, psychiatric expertise is of great importance.

6. Conclusion

It is the conclusion of this paper that homicides should be considered sex-related when they involve multiple stabbing (meaning when there are three or more stab wounds present), regardless of whatever the age and gender of the victim may be. This is even more important in cases where the victim is female. If the victim is male, however, it is very likely that the homicide was committed by a person the victim had known. It should be kept in mind that the term 'sex-related' does not simply refer only to a sexual act or another variety of direct sexual relations, but to some other circumstances that could be related to one's sexual life as a whole (e.g., jealousy, paraphilia, disturbed emotional relationships, etc). Psychiatric patients certainly may be considered to be possible aggressors and should be seriously taken into consideration if the assailant is unknown. Nevertheless, jealousy is still the most frequent cause that leads to this kind of homicide.

Mutilation of the victim's external genitalia is highly indicative of a sex-related homicide, regardless of the homicide method, or the victim's age or gender. Also of note is that all five victims of such murders reviewed in the cases of this study had known their murderers.

Conflict of interest

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None declared.

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